

WHAT IS CLAIMED IS:

- 5ub
a1
1. A method for producing a composite structure having a three-
dimensionally curved portion and a cylindrical portion, comprising the steps of:
(a) placing an outer skin made of a composite prepreg on a forming die; (b)
5 mounting a honeycomb core on a portion of said outer skin that forms said
three-dimensionally curved portion; (c) superimposing an inner skin made of a
composite prepreg thereon; (d) arranging a preformed frame member and a
preformed stringer member each made of a composite prepreg on a portion of
said inner skin that forms said cylindrical portion to prepare an assembly; and
10 (e) forming said assembly by heating under a pressure.
 2. The method for producing a composite structure according to claim 1,
wherein said assembly is formed by heating under a pressure while disposing an
elastic plate and a press plate on a fin portion where said outer skin and said
inner skin overlap each other.
 - 15 3. The method for producing a composite structure according to claim 1,
wherein said fin portion has a width of 500 mm or more.
 4. The method for producing a composite structure according to claim 1,
20 wherein said assembly is formed by heating under a pressure of 6 to 7 kg/cm².
 5. The method for producing a composite structure according to claim 1,
25 wherein a plurality of said preformed frame members are linearly arranged at an
interval on said portion of said inner skin that forms said cylindrical portion, one
or more of said preformed stringer member passing through said interval and
intersecting said preformed frame members; and said assembly is formed by
heating while using a forming jig comprising a combination of an elastic jig
engageable with the intersection of said preformed frame members and said
preformed stringer member, and rigid jigs attachable to said preformed frame
members and said preformed stringer member in portions other than said
intersection.
 6. The method for producing a composite structure according to claim 1,

54
2

usable for producing an aircraft body.

7. A composite structure obtained by the method recited in claim 1.

11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100